Internal Power Battery Life	1 to 24 month depending on sensors / logging rates
External Power	5-15 vdc
Operating Temperature	0 to 50°C, non-freezing
Depth Rating	200 m
Communications	RS-232, SDI-12, RS-485, Modbus ® USB or Bluetooth
Sample Rate	1 Hz
Data Memory	>1,000,000 logged readings
Logging Rates	1 second to 1 day
Warranty	2 years (All sensors excluding ISE's)

General Specifications	Proteus 30	Proteus 35	Proteus 40
Diameter	75 mm (2.95")	89 mm (3.5")	102 mm (4.00")
Length - w/o Battery Pack	483 mm (19")	483 mm (19")	483 mm (19")
Weight - with IBP	2.3 kg (5.0 lbs)	4.1 kg (9.0 lbs)	4.5 kg (10.0 lbs)
Number of sensors	Up to 7	Up to 11	Up to 13
Battery Pack	8 "C" cells	8 "C" cells	8 "C" cells

Sensor Specifications

Parameter		Range**	Resolution	Accuracy	Comments
BOD	BOD mg/l	0-300 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Coliform Counts	CFU/100 ml	>1 count/100ml	1 count/100ml	±10 Coliforms*	Local site calibration can improve accuracy. Can be used for faecal coliforms, E. coli or total coliforms.
COD	COD mg/l	0-600 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
DOC	DOC mg/l	0 - 400 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
TOC	TOC mg/l	0 - 500 mg/l	0.01 mg/l	±5 % of reading*	Local site calibration can improve accuracy.
Temperature	Water Temperature	-5 to 50°C	0.01	±0.1	Never needs calibration.
pH/ORP	pH	0 to 14 units	0.1	±0.1 within 10°C of calibration, 0.2°C otherwise	Refillable reference electrode; corrected for temperature; typical sensor life > 4 years.
	ORP	-999 to 999 mV	1	±20 mV	Platinum ORP sensor is combined with pH sensor.
Turbidity	Total Suspended Solids (TSS)	0 to 500 mg/l	4 digits with maximum of two decimals	±2 % of reading or 0.2	Calculated using the correlation between turbidity and a sediment standard or sample. Local calibration can be applied **.
	Turbidity	0-40 NTU	4 digits with maximum of two decimals	±2 % of reading or 0.2	Compensated for temperature; filtered for non-turbidity spikes; includes wiper to clean the optics.
		40-400 NTU		±2 % of reading or 0.2	
		400-5000 NTU		±2 % of range	
	Transmissivity	0 to 100 % transmission	4 digits	Linearity of 0.99R^2	Mounts alongside the Proteus.
Optical Dissolved Oxygen	Concentration	0 to 20 mg/l	0.01	±0.1	Compensated for temperature and salinity; EPA approved "lifetime" luminescence method; typical sensor cap life > 4 years.
		20 to 30 mg/l	0.01	±0.15	
		30 to 50 mg/l	0.1	±5 %	
	% saturation	0 to 500 % saturation	0.1%	Corresponds with the accuracy of the concentration reading	
Conductivity	Specific conductance, µS/cm	0 to 5000 µS/cm	4 digits max one decimal	±0.5 % of reading ±0.001	Corrected for temperature; four easy-to-clean graphite electrodes; optional sensor provides ±0.5 % of reading accuracy to 100 mS/cm.
	Specific conductance, mS/cm	0 to 10 mS/cm		±1 % of reading ±0.001	
		10 to 100 mS/cm		±1 % of reading	
		100 to 275 mS/cm		±2 % of reading	
	Salinity	0 to 70 PSS	0.01	±0.2	Calculated from specific conductance. PSS = Practical Salinity Scale which is roughly equivalent to ppt.
	Total dissolved solids (TDS)	0 to 65 g/l	0.1	±5 % of reading	Calculated from specific conductance.

Sensor Specifications

Parameter		Range	Resolution	Accuracy	Comments
Pressure	Depth	0 to 25 m	0.01	±0.05 m	Conductivity sensor fitted for Salinity.
		0 to 200 m		±0.4 m	
	Vented depth (level)	0 to 10 m	0.001	±0.003 m	Compensated for temperature, salinity, barometric pressure.
	Barometric pressure	400 to 900 mmHg	0.1 mmHg	±1.5 mmHg	Included with (non-vented) depth sensor.
Fluorometers	Chlorophyll a - blue	0 to 500 µg/l	6 digits with maximum of two decimals	Linearity of 0.99R^2	Highest-quality LED based fluorometric sensors rated to 600 m depth otherwise max depth same as depth sensor.
	Chlorophyll b - red	0 to 500 µg/l			
	Rhodamine dye	0 to 1000 ppb			
	Phycocyanin (freshwater BGA)	0 to 40,000 ppb			
	Phycoerythrin (marine BGA)	0 to 750 ppb			
	CDOM/fDOM	0 to 1250 or 0 to 5000 ppb			
	Optical brighteners	0 to 15,000 ppb			
	Tryptophan	0 to 20,000 ppb			
	Fluorescein dye	0 to 500 ppb			
	Refined oil	0 to 10,000 ppb			
	Crude oil	0 to 1500 ppb			
Ion-selective electrodes (ISE's)	Ammonium	0 to 100 mg/l as nitrogen	0.1	±5 % or 2 mg/l	Corrected for ionic strength (via conductivity readings); the accuracy specification relies on non-trivial maintenance practice and frequent calibration near the temperature of measurement; ammonium and nitrate require tip replacement every 3 - 6 months. Please contact us for applications >10 m.
	Nitrate	0 to 100 mg/l as nitrogen			
	Chloride	0 to 18,000 mg/l			
	Sodium	0 to 20,000 mg/l			
	Calcium	0 to 40,000 mg/l			
	Bromide	0 to 80,000 mg/l			
TDG	Total Dissolved Gas	600-800 mmHg	0.1 mmHg	±0.1 mmHg	Pressure sensor with gas permeable membrane, max depth 15m.
PAR	Photometric PAR	10,000 µmol/cm2	4 digits	±5 % of reading	LiCor spherical sensor.

* providing adequate field calibration ** customized ranges are available